

General

Guideline Title

Management of varicella infection (chickenpox) in pregnancy.

Bibliographic Source(s)

Shrim A, Koren G, Yudin MH, Farine D. Management of varicella infection (chickenpox) in pregnancy. J Obstet Gynaecol Can. 2012 Mar;34(3):287-92. [36 references] [PubMed](#)

Guideline Status

This is the current release of the guideline.

Recommendations

Major Recommendations

The quality of evidence (I-III) and classification of recommendations (A-L) are defined at the end of the "Major Recommendations."

1. Varicella immunization is recommended for all non-immune women as part of pre-pregnancy and postpartum care. (II-3B)
2. Varicella vaccination should not be administered in pregnancy. However, termination of pregnancy should not be advised because of inadvertent vaccination during pregnancy. (II-3D)
3. The antenatal varicella immunity status of all pregnant women should be documented by history of previous infection, varicella vaccination, or varicella zoster immunoglobulin G serology. (III-C)
4. All non-immune pregnant women should be informed of the risk of varicella infection to themselves and their fetuses. They should be instructed to seek medical help following any contact with a person who may have been contagious. (II-3B)
5. In the case of a possible exposure to varicella in a pregnant woman with unknown immune status, serum testing should be performed. If the serum results are negative or unavailable within 96 hours from exposure, varicella zoster immunoglobulin should be administered. (III-C)
6. Women who develop varicella infection in pregnancy need to be made aware of the potential adverse maternal and fetal sequelae, the risk of transmission to the fetus, and the options available for prenatal diagnosis. (II-3C)
7. Detailed ultrasound and appropriate follow-up is recommended for all women who develop varicella in pregnancy to screen for fetal consequences of infection. (III-B)
8. Women with significant (e.g., pneumonitis) varicella infection in pregnancy should be treated with oral antiviral agents (e.g., acyclovir 800 mg 5 times daily). In cases of progression to varicella pneumonitis, maternal admission to hospital should be seriously considered. Intravenous acyclovir can be considered for severe complications in pregnancy (oral forms have poor bioavailability). The dose is usually 10 to 15 mg/kg of body weight or 500 mg/m² IV every 8 h for 5 to 10 days for varicella pneumonitis, and it should be started within 24 to 72 h of the onset of rash. (III-C)
9. Neonatal health care providers should be informed of peripartum varicella exposure in order to optimize early neonatal care with varicella

zoster immunoglobulin and immunization. (III-C) Varicella zoster immunoglobulin should be administered to neonates whenever the onset of maternal disease is between 5 days before and 2 days after delivery. (III-C)

Definitions:

Quality of Evidence Assessment*

I: Evidence obtained from at least one properly randomized controlled trial.

II-1: Evidence from well-designed controlled trials without randomization.

II-2: Evidence from well-designed cohort (prospective or retrospective) or case-control studies, preferably from more than one centre or research group.

II-3: Evidence obtained from comparisons between times or places with or without the intervention. Dramatic results in uncontrolled experiments (such as the results of treatment with penicillin in the 1940s) could also be included in this category.

III: Opinions of respected authorities, based on clinical experience, descriptive studies, or reports of expert committees.

*Adapted from the Evaluation of Evidence criteria described in the Canadian Task Force on Preventive Health Care.

Classification of Recommendations†

A. There is good evidence to recommend the clinical preventive action.

B. There is fair evidence to recommend the clinical preventive action.

C. The existing evidence is conflicting and does not allow to make a recommendation for or against use of the clinical preventive action; however, other factors may influence decision-making.

D. There is fair evidence to recommend against the clinical preventive action.

E. There is good evidence to recommend against the clinical preventive action.

L. There is insufficient evidence (in quantity or quality) to make a recommendation; however, other factors may influence decision-making.

†Adapted from the Classification of Recommendations criteria described in The Canadian Task Force on Preventive Health Care.

Clinical Algorithm(s)

None provided

Scope

Disease/Condition(s)

- Varicella infection (chickenpox) in pregnancy
- Congenital varicella syndrome
- Neonatal varicella
- Varicella pneumonitis

Guideline Category

Diagnosis

Evaluation

Management

Prevention

Treatment

Clinical Specialty

Family Practice

Infectious Diseases

Internal Medicine

Nursing

Obstetrics and Gynecology

Pediatrics

Preventive Medicine

Pulmonary Medicine

Intended Users

Advanced Practice Nurses

Hospitals

Nurses

Physician Assistants

Physicians

Guideline Objective(s)

To review the existing data regarding varicella zoster virus infection (chickenpox) in pregnancy, interventions to reduce maternal complications and fetal infection, and antepartum and peripartum management

Target Population

- Pregnant women and women of childbearing age who are not immune to varicella (i.e., not previously vaccinated or no history of varicella infection)
- Women who develop varicella during pregnancy
- Neonates exposed to varicella in the peripartum

Interventions and Practices Considered

1. Varicella vaccination for nonimmune women (not recommended during pregnancy)
2. Documentation of antenatal varicella immunity status of all pregnant women
3. Counseling nonimmune women about risks of varicella infection
4. Serum testing of pregnant women with unknown immune status when exposure to varicella is suspected
5. Administration of varicella zoster immunoglobulin in cases of possible exposure during pregnancy
6. Counseling pregnant women who develop varicella infection concerning awareness of the potential adverse maternal and fetal sequelae, the risk of transmission to the fetus, and the options available for prenatal diagnosis
7. Ultrasound and follow-up for women who develop varicella in pregnancy to screen for fetal consequences of infection

8. Acyclovir treatment for confirmed varicella pneumonitis during pregnancy
9. Neonatal care with varicella zoster immunoglobulin and immunization

Major Outcomes Considered

- Incidence of congenital varicella syndrome (embryopathy) or neonatal varicella
- Effectiveness of varicella zoster vaccination
- Effectiveness of antiviral agents (e.g., acyclovir) and varicella immunoglobulin
- Effectiveness of serum testing for varicella infection

Methodology

Methods Used to Collect/Select the Evidence

Searches of Electronic Databases

Description of Methods Used to Collect/Select the Evidence

Medline was searched for articles and clinical guidelines published in English between January 1970 and November 2010. The maternal and fetal outcomes in varicella zoster infection were reviewed, as well as the benefit of the different treatment modalities in altering maternal and fetal sequelae.

Number of Source Documents

Not stated

Methods Used to Assess the Quality and Strength of the Evidence

Weighting According to a Rating Scheme (Scheme Given)

Rating Scheme for the Strength of the Evidence

Quality of Evidence Assessment*

I: Evidence obtained from at least one properly randomized controlled trial.

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III: Opinions of respected authorities, based on clinical experience, descriptive studies, or reports of expert committees.

*Adapted from the Evaluation of Evidence criteria described in the Canadian Task Force on Preventive Health Care.

Methods Used to Analyze the Evidence

Systematic Review

Description of the Methods Used to Analyze the Evidence

The quality of evidence was rated using the criteria described in the Report of the Canadian Task Force on the Preventive Health Care. Recommendations for practice were ranked according to the method described in that report.

Methods Used to Formulate the Recommendations

Expert Consensus

Description of Methods Used to Formulate the Recommendations

Not stated

Rating Scheme for the Strength of the Recommendations

Classification of Recommendations†

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†Adapted from the Classification of Recommendations criteria described in The Canadian Task Force on Preventive Health Care.

Cost Analysis

A formal cost analysis was not performed and published analyses were not reviewed.

Method of Guideline Validation

Internal Peer Review

Description of Method of Guideline Validation

This Clinical Practice Guideline has been prepared by the Maternal Fetal Medicine Committee, reviewed by the Infectious Diseases Committee and the Family Physician Advisory Committee, and approved by the Executive and Council of the Society of Obstetricians and Gynaecologists of Canada (SOGC).

Evidence Supporting the Recommendations

Type of Evidence Supporting the Recommendations

The type of supporting evidence is identified and graded for each recommendation (see the "Major Recommendations" field).

Benefits/Harms of Implementing the Guideline Recommendations

Potential Benefits

- Improved maternal and fetal outcomes
- Reduction of maternal complications and fetal infection
- Improved antepartum and peripartum management

Potential Harms

The most frequent adverse reaction following varicella zoster immunoglobulin (VZIG) administration is local discomfort at the injection site, with pain, redness, and swelling occurring in approximately 1% of people. Less frequent adverse events include gastrointestinal symptoms, malaise, headache, rash, and respiratory symptoms, which occur in approximately 0.2% of recipients. Severe events, such as angioneurotic edema and anaphylactic shock, are rare (occurring in <0.1% of recipients). Obstetrical care providers need to be aware of the availability of testing and therapy in their local environment. As both testing and therapy are time sensitive, it is important to know the turnover time for the test in local laboratories, and how to arrange VZIG administration. As VZIG is a blood product, patient consent is required.

Qualifying Statements

Qualifying Statements

This document reflects emerging clinical and scientific advances on the date issued and is subject to change. The information should not be construed as dictating an exclusive course of treatment or procedure to be followed. Local institutions can dictate amendments to these opinions. They should be well documented if modified at the local level. None of these contents may be reproduced in any form without prior written permission of the Society of Obstetricians and Gynaecologists of Canada (SOGC).

Implementation of the Guideline

Description of Implementation Strategy

An implementation strategy was not provided.

Implementation Tools

Foreign Language Translations

For information about availability, see the *Availability of Companion Documents* and *Patient Resources* fields below.

Institute of Medicine (IOM) National Healthcare Quality Report Categories

IOM Care Need

Getting Better

Staying Healthy

IOM Domain

Effectiveness

Patient-centeredness

Identifying Information and Availability

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Adaptation

Not applicable: The guideline was not adapted from another source.

Date Released

2012 Mar

Guideline Developer(s)

Society of Obstetricians and Gynaecologists of Canada - Medical Specialty Society

Source(s) of Funding

Society of Obstetricians and Gynaecologists of Canada

Guideline Committee

Maternal Fetal Medicine Committee

Composition of Group That Authored the Guideline

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Financial Disclosures/Conflicts of Interest

Disclosure statements have been received from all members of the committee.

Guideline Status

This is the current release of the guideline.

Guideline Availability

Electronic copies: Available in Portable Document Format (PDF) from the [Society of Obstetricians and Gynaecologists of Canada \(SOGC\) Web site](#) . Also available in French from the [SOGC Web site](#) .

Print copies: Available from the Society of Obstetricians and Gynaecologists of Canada, La société des obstétriciens et gynécologues du Canada (SOGC) 780 promenade Echo Drive Ottawa, ON K1S 5R7 (Canada); Phone: 1-800-561-2416

Availability of Companion Documents

None available

Patient Resources

None available

NGC Status

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